

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Dan MOLANDER

Serial No. 09/687,654

Filed: October 13, 2000

Group Art Unit: 3727

Examiner: S. Castellano

For: A STACKABLE PLASTIC BOX BLANK AND METHOD OF FORMING SAME

Board of Patent Appeals and Interferences
Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Applicant transmits herewith Appellant's Brief, in triplicate, for the above identified application.

A check payable to the Director of the United States Patent and Trademark Office in the amount of \$160.00 for is enclosed. The Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 06-1450 of Foley & Lardner. A duplicate copy of this correspondence is attached.

Respectfully submitted,

Date: 10/10/02

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Jane Herold

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Examiner: Stephen J. Castellano

Board of Patent Appeals and Interferences
Commissioner for Patents
Washington D.C. 20231

APPELLANT'S BRIEF

REAL PARTY IN INTEREST

Recopac AB is the real party in interest by virtue of an assignment of the above-referenced patent application from Mouldex Plast AB to Recopac AB. The assignment of the application was recorded in the Patent and Trademark Office at Reel 011737, Frame 0263. The parent application was previously assigned to Mouldex Plast AB by the inventor, Dan Molander,

10/22/2002 and was recorded in the Patent and Trademark Office at Reel 010443, Frame 0910.

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RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are known to the Appellant, the inventor, or the Appellant's legal representatives which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

STATUS OF CLAIMS

Claims 1-17 are pending in the above-referenced patent application. The rejection of claims 1-17 is therefore being appealed.

STATUS OF AMENDMENTS

On May 8, 2002, Appellant submitted an Amendment and Reply in conjunction with a Request for Continued Examination, in which claims 1 and 9 were amended. The Examiner accepted the amendments without comment in a June 20, 2002 Office Action.

SUMMARY OF INVENTION

- The present application relates to a box blank. The box blank is formed from a plastics material and comprises a plurality of hinge elements connecting a plurality of panels which form the sides of the box. The hinge elements and the panels are formed from different plastics materials.

ISSUES

The first issue presented in this appeal is whether the invention as claimed in claims 1-3, 7-9 and 11-14, is anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 5,829,595 to *Brown et al.*

The second issue presented in this appeal is whether the invention as claimed in claims 4-6, 10 and 15-17, is obvious over U.S. Patent No. 5,829,595 to *Brown et al.*, in view of U.S. Patent No. 4,407,427 to *Reuter*.

GROUPING OF CLAIMS

Claims 1-3, 7-9 and 11-14 comprise a first subgroup of claims that will be discussed together; additional reasons are given for overturning the rejections of dependent claims 2 and 3. Claims 4, 10 and 15-17 comprise a second subgroup of claims that will be discussed together.

DISCUSSION

I. The Examiner Has Not Shown *Prima Facie* Anticipation.

The Examiner has not made an adequate showing that claims 1-3, 7-9 and 11-14 are anticipated by U.S. Patent No. 5,829,595 to *Brown et al.* More particularly, the Examiner has failed to cite any reference that discloses a unitary box blank in which a plurality of hinge elements are connected and fused to a plurality of panels for forming sides of a box.

For a prior art reference to anticipate the claim of a patent, the reference must disclose each and every limitation of a claimed invention. *See Apple Computer, Inc. v. Articulate Systems, Inc.*, 234 F.3d 14, 20 (Fed. Cir. 2000). To make a *prima facie* case of anticipation, the Examiner must show that a reference contains a disclosure which is specific as to every element of the claims at issue. *See, e.g., In re Jochen Wagner and Helmut Wiss*, 2001 WL 1048474 (B. Pat. App & Interf. 2001), *In re Wilder*, 57 C.C.P.A. 1314, 1319, 429 F.2d 447, 451 (C.C.P.A. 1970). In this case, U.S. Patent No. 5,829,595 to *Brown et al.* does not disclose every limitation of claims 1-3, 7-9 and 11-14.

U.S. Patent No. 5,829,595 to *Brown et al.* discloses a pallet sleeve assembly in the form of two twin-sheet thermoformed thermoplastic sleeve halves. As the title of the patent suggests, *Brown et al.* discloses a pair of separate and structurally distinct sleeve halves 26. In order to couple the sleeve halves to each other, each sleeve half 26 is formed with ramped mating edges

85 such that the mating edges of one sleeve half 26 overlap with a corresponding mating edge 85 of a corresponding sleeve half 26. The underlying pallet 22 includes a peripheral groove for receiving the two sleeve halves 26. A cover 30 overlies the sleeve halves 26. As can be clearly seen in Figure 1, the individual sleeve halves 26 are initially formed structurally separate and distinct from both the underlying pallet 22 and the cover 30. A plurality of connectors 32 are used to fasten each sleeve half 26 to the underlying pallet 22 and to the cover 30. In an alternate embodiment, a single sleeve 152 is formed structurally separate and distinct from the underlying pallet 22 and the cover 30.

Unlike the pallet assembly of *Brown et al.*, the present invention is directed to a unitary box blank. Claim 1 is representative of this particular subgroup:

“A unitary box blank formed from a plastic material and comprising a plurality of hinge elements connecting and fused to a plurality of panels for forming sides of the box, the hinge elements being formed from a different plastics material than the panels.”

There are multiple elements described in claim 1 that are entirely missing from the product described in *Brown et al.*, negating any possibility of anticipation under 35 U.S.C. § 102(b). First, *Brown et al.* does not disclose, teach or describe a box blank. The web site www.dictionary.com defines the term “blank” as “manufactured article of a standard shape or form that is ready for final processing, as by stamping or cutting.” The product described in *Brown et al.* does not meet this definition. The individual components in *Brown et al.* are not components which require final processing, as each of the individual components is already complete. This is particularly evident in the fact that one of the “panels” in *Brown et al.* is defined as a pallet 22, which is its own distinct product and requires additional fabrication to form a completed pallet. Claims 1 and 9 of the present application, on the other hand, are

specifically directed to a *box blank*, and this term takes on its ordinary meaning, namely a blank that must be further manipulated to become the completed box. This is structurally distinct from the pallet assembly of *Brown et al.* For this reason alone, the rejection of claims 1-3, 7-9 and 14 should be overturned.

Second, the product described in *Brown et al.* does not disclose, teach or even suggest a *unitary* box blank as specifically required in claim 1 and claim 9. As is discussed in the “Background of the Invention” of the present application, conventional boxes include drawbacks such as weak hinges. This problem is minimized by the box blank as described in the present application. By forming a unitary or singular box blank in which all of the panels are bonded to each other via the hinge elements, the strength of hinges is increased. This feature is entirely absent from *Brown et al.*, in which individual components are formed completely separate from each other. As a result, the “box” described in *Brown et al.* has several pieces, such as the pallet 22, two sleeve halves 26 and a cover 30, that are not permanently secured to each other, creating additional hinge areas of potential weakness. By having up to four separate distinct and structurally separate components, the product can in no reasonable way be considered unitary and suffers from the precise drawbacks which the invention of the present application was intended to overcome by having every portion of the box blank permanently coupled to every other portion. For this reason alone, the rejection of claims 1-3, 7-9 and 14 should be overturned.

Third, the product described in *Brown et al.* does not disclose the panels and hinges as being formed from different plastics materials. Claim 1 is clear and unambiguous that hinge elements are formed from a different plastics material than the plastics material used for forming the panels. This feature is clearly described on page 5 of the present application, where the different materials that are used possess different melt indices such that the structure of the net

(the hinge elements) is preserved while still fusing with the then-forming panels to form a blank. *Brown et al.* is completely silent as to forming the panels and hinge elements from different materials for any purpose. In fact, *Brown et al.* never defines the plastics materials to be used in *any* component other than to state that “thermoplastic material” or “molded plastic” may be used. *Brown et al.* never describes the type of plastic which is intended to comprise either the panels or the hinge elements. This is especially significant because *Brown et al.* does describe the particular composition of the optional reinforcing vertical substrate member 74 (column 4, ll. 30-34), clearly demonstrating that *Brown et al.* was clear in defining particular types of materials when it intended to do so. Instead of being similarly specific, *Brown et al.* uses generic terms to describe the composition of the hinge elements and the panels. It is therefore impossible to assert that *Brown et al.* teaches the use of different plastics materials for the panels and the hinge elements. For this reason alone, the rejection of claims 1-3, 7-9 and 14 should be overturned.

Additionally, there are a number of features in the dependent claims that are also absent from *Brown et al.*, negating any potential anticipation. For example, claim 2 requires that the hinge elements be formed from a plastics material having a greater toughness but less rigidity than the plastics material forming the panels. As *Brown et al.* does not even suggest that different plastics material be used, it is impossible for the same reference to teach different plastics with varying toughness and rigidity.¹ In fact, the terms “tough” or “toughness” do not appear anywhere in *Brown et al.* For the same reasons, *Brown et al.* cannot disclose or teach that

¹ In the February 8, 2002 Office Action, the Examiner rejected claim 2 under 35 U.S.C. § 112 on the grounds that, in the Examiner's opinion, the term “toughness is exactly the same as rigidity.” The Examiner then proceeded to reject the same claim under 35 U.S.C. § 102(b), asserting without support that “[t]he hinge element plastic has greater toughness and less rigidity than the panel plastic.” Similar rejections were also made in the June 7, 2001 Office Action. Although the rejection under 35 U.S.C. § 112 was ultimately withdrawn, these irreconcilable and wholly inconsistent positions taken by the Examiner in the same Office Actions demonstrate a fundamental lack of understanding of the invention described in claim 2.

the hinge elements and panels as being formed from plastics materials belonging to the same family of compounds, as is specifically required by claim 3.

The Examiner has repeatedly asserted that claims 1-3, 7-9 and 11-14 are anticipated by *Brown et al.*, but the Examiner's arguments are deficient in a number of respects. First, the Examiner has asserted that *Brown et al.* discloses "a twin sheet thermoformed thermoplastic sleeve half (26) which defines a unitary box blank." As is clearly shown in Figure 1 of *Brown et al.*, however, the sleeve half 26 by itself cannot, under any reasonable interpretation, define a box blank, since the sleeve half 26 does not include either a top or a bottom of the box to be formed. In fact, the single sleeve half cited by the Examiner does not even define the four side walls of a box; a second and structurally separate sleeve half is required to form the fourth wall.

Second, the Examiner has conspicuously failed to provide any support for several of his assertions. In particular, the Examiner has provided absolutely no support for his assertions that 1) the product of *Brown et al.* constitutes a box blank; 2) the "box blank" of *Brown et al.* is unitary; 3) the hinge elements are formed from a different plastics materials than the panels; 4) the hinge elements and panels are formed from plastics materials belonging to the same family of compounds; or 5) the hinge elements have greater toughness and less rigidity than the panel plastic.

Furthermore, the Examiner has consistently failed to comment on or even acknowledge the presence of Appellant's arguments relating to the patentability of the claims at issue. The combination of failing to address Appellant's arguments while simultaneously failing to identify with any particularity the support for his rejections is in clear violation of Section 706.07 of the Manual of Patent Examining Procedure, which requires the Examiner's arguments to be "clearly

developed to such an extent that applicant may readily judge the advisability of an appeal, unless a single previous Office action contains a complete statement supporting the rejection.”

For all of the above reasons, the rejection of claims 1-3, 7-9 and 11-14 should be overturned.

II. The Examiner Has Not Shown *Prima Facie* Obviousness.

The Examiner has not made an adequate showing that claims 4-6, 10 and 15-17 are obvious over *Brown et al.* in view of U.S. Patent No. 4,407,427, issued to *Reuter*. More particularly, the Examiner has failed to cite any reference that discloses a unitary box blank in which a plurality of hinge elements are connected and fused to a plurality of panels for forming sides of the box, nor has the Examiner demonstrated any motivation to combine the teachings of *Reuter* with the pallet sleeve assembly of *Brown et al.*

In *In re Rijckaert*, 9 F.3d 1531, 1532, (Fed. Cir. 1993), the Federal Circuit outlined the burden on the PTO as follows:

In rejecting claims under 35 U.S.C. 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.* “A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” *In re Bell*, 991 F.2d 781, 782, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 U.S.P.Q. 143, 147 (CCPA 1976)). If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reasonable suggestion or motivation to modify the prior art reference or to combine reference teachings. Second, there must be a reasonable expectation of success of achieving the desired goals. Finally, the prior art references when combined must teach all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the Applicant's disclosure. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

The Federal Circuit stated that the PTO can satisfy its burden of establishing a *prima facie* case of obviousness only by showing some objective teaching in the prior art, or that knowledge generally available to one of ordinary skill in the art, would lead that individual to combine the relevant teachings of the references. *In re Fritch*, 972 F.2d 1260 (Fed. Cir. 1992). One cannot use hindsight reconstruction to pick and choose among disclosures in the prior art to create the claimed invention. *In re Fine*, 837 F.2d at 1075.

First, *Brown et al.* and *Reuter*, either alone or in combination, fail to teach all of the claim limitations in claims 4-6, 10 and 15-17. As is amply described in regards to claims 1-3, 7-9 and 11-14, *Brown et al.* does not disclose, teach, or even suggest a box blank of any sort or a box blank that is singular or unitary, specifically required in claims 4-6, 10 and 15-17, nor does it disclose a unitary box blank where the panels and the hinge elements are formed from different plastics materials, as is required in claims 4-6 and 10. *Reuter*, on the other hand, is directed to a container cover. *Reuter* does not disclose any sort of box blank at all, nor does *Reuter* teach the use of different plastics materials for the panels and the hinge elements. Because all of the features are missing from both *Brown et al.* and *Reuter*, the Examiner's rejection of claims 4-6,

10 and 15-17 fails to meet one of the critical requirements delineated in *In re Vaeck*. For this reason alone, the rejection of claims 4-6 and 10 should be overturned.

Additionally, even if all of the features were disclosed in combination by the prior art, which they do not, there is no reasonable suggestion or motivation to combine the reference teachings. In particular, there is no motivation or suggestion to combine the polypropylene lid of *Reuter* with the structure in *Brown et al.* to develop a box blank where the panels and the hinge elements are formed from different plastics materials. As discussed earlier, *Brown et al.* never describes the plastics material for use in the hinge elements or panels with any degree of particularity, much less describing different plastics materials for each component. In the case of *Reuter*, not only does the reference not teach the use of different plastics materials, it in fact teaches away from this concept. In particular, column 3, lines 35-44, specifically describes the entire cover as being “injection molded from rubber-modified polypropylene” and that one advantage of the invention is the manufacture of “a single, homogenous integral plastic cover.” Both of these unambiguous statements conclusively demonstrate that one skilled in the art would not look to combine a homogenous cover with a pallet assembly in order to develop a unitary box blank where different components are manufactured from different materials. For this reason alone, the rejection of claims 4-6 and 10 should be overturned.

Still further, neither *Brown et al.* nor *Reuter* even suggests a motivation for utilizing panels and hinge elements formed from different plastics materials. As discussed earlier, page 5 of the present application describes that different materials are used for the hinge elements and the panels because, by possessing different melt indices, the structure of the net (the hinge elements) is preserved while still fusing with the then-forming panels to form a blank. The entire concept of different melt indices for promoting both the preservation of structure and the fusion

of the components is entirely missing from both *Brown et al.* and *Reuter*. Because the benefits unambiguously described in the present application are not even suggested in either *Brown et al.* or *Reuter*, Appellant submits that the only way in which one skilled in the art would combine the reference would be through the use of hindsight, which is explicitly forbidden.

For all of the above reasons, the rejection of claims 4-6, 10 and 15-17 should be overturned.

CONCLUSION

The Examiner rejected claims 1-3, 7-9 and 11-14 under 35 U.S.C. § 102(b), but the Examiner has not established a *prima facie* case for anticipation. U.S. Patent No. 5,829,595 to *Brown et al.* does not disclose, teach, or even suggest a unitary box blank as is claimed in claims 1-3, 7-9 and 11-14, nor does the cited prior art disclose a box blank where the panels and hinges are formed from different plastics materials. Similarly, U.S. Patent No. 5,829,595 to *Brown et al.* does not disclose, teach or even suggest a box blank where the hinge elements are formed from a plastics material having a greater toughness but less rigidity than the plastics material forming the panels, as required in claim 2. U.S. Patent No. 5,829,595 to *Brown et al.* also does not disclose, teach or suggest a unitary box blank where the hinge elements and panels as being formed from plastics materials belonging to the same family of compounds, as required in claim 3.

Similarly, the Examiner has failed in his burden in finding a *prima facie* case of obviousness of claims 4-6, 10 and 15-17, based upon U.S. Patent No. 5,829,595 to *Brown et al.*, in view of U.S. Patent No. 4,407,427 to *Reuter*. The cited prior art, either alone or in combination, fails to disclose a box blank, a unitary box blank, or a unitary box blank where the

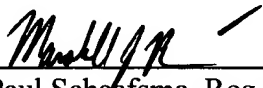
hinge elements and the panels are formed from different plastics materials. Furthermore, there is no motivation or suggestion to combine the two cited prior art references, and in fact the prior art teaches away from such a combination. Lastly, the benefits identified in the present application of using plastics of different materials are absent from the prior art, further diminishing any motivation for combining the references absent the use of hindsight.

The final rejections of claims 1-17 should therefore be reversed, and these claims allowed.

Pursuant to 37 C.F.R. 1.17(c), a check in the amount of \$160.00 is enclosed to cover the filing fee for a brief in support of appeal for a small entity. Any deficiency may be deducted from Deposit Account 06-1450. This Appeal Brief is submitted in triplicate.

Respectfully submitted,

Dated: 10/10/02



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APPENDIX

1. A unitary box blank formed from a plastics material and comprising a plurality of hinge elements connecting and fused to a plurality of panels for forming sides of the box, the hinge elements being formed from a different plastics material than the panels.

2. A blank as claimed in claim 1 wherein the hinge elements are formed from a plastics material having a greater toughness but less rigidity than the plastics material forming the panels.

3. A blank as claimed in claim 1 wherein the hinge elements and panels are formed from plastics materials belonging to the same family of compounds.

4. A blank as claimed in claim 1 wherein the hinge elements are formed from rubber-modified polypropylene.

5. A blank as claimed in claim 1 wherein the panels are formed from polypropylene.

6. A blank as claimed in claim 1 wherein the hinge elements are formed from a plastics material having a lower melt index than the plastics material from which the panels are formed.

7. A blank as claimed in claim 1 wherein the hinge elements include a plurality of projections formed thereon.

8. A blank as claimed in claim 1 wherein the panels include structural panels for forming the sides of the box and load bearing panels, the load bearing panels being connected to the structural panels by hinge elements formed not perpendicular to the intended direction of load support provided by the load bearing panels.

9. A unitary box blank comprising a plurality of panels connected by and fused to hinge elements, the panels including structural panels for forming the sides ^{NAB} of the box and load bearing panels, the load bearing panels being connected to the structural panels by hinge elements formed not perpendicular to the intended direction of load support provided by the load bearing panels, the panels and hinge elements being formed from plastics.

10. A blank as claimed in claim 1 wherein the hinge elements are formed from rubber-modified polyethylene.

11. A blank as claimed in claim 1 wherein the panels are formed from polyethylene.

12. A blank as claimed in claim 1 wherein the panels and hinge elements are fused together.

13. A blank as claimed in claim 7 wherein the projections protrude from the panels.

14. The box blank of claim 9, wherein the panels are formed from polyethylene.

15. The box blank of claim 14, wherein the hinge elements are formed from rubber modified polypropylene.

16. The box blank of claim 9, wherein the panels and the hinge elements are formed from polypropylene.

17. The box blank of claim 9, wherein the panels and the hinge elements are formed from polyethylene.